

## CLAIMS

1. A polysulfone type selectively permeable hollow fiber membrane comprising a polysulfone type resin and a  
5 hydrophilic polymer as main components, characterized in that

(A) the content of the hydrophilic polymer in the uppermost layer of a surface of the polysulfone type hollow fiber membrane on the blood-contacting side is at least 1.1 times  
10 larger than the content of the hydrophilic polymer in the proximate layer of said surface on the blood-contacting side, and

(B) the content of the hydrophilic polymer in the uppermost layer of the other surface of the polysulfone type hollow  
15 fiber membrane, i.e., the reverse side of the surface on the blood-contacting side, is at least 1.1 times larger than the content of the hydrophilic polymer in the uppermost layer of said surface on the blood-contacting side.

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2. The hollow fiber membrane of claim 1, wherein said uppermost layer of the surface of the polysulfone type hollow fiber membrane on the blood-contacting side is a layer between the blood-contacting surface and a position  
25 present at a depth of 10 nm from the blood-contacting surface, and wherein said proximate layer is a layer between the blood-contacting surface and a position present at a depth of 1,000 to 1,500 nm (1 to 1.5  $\mu\text{m}$ ) from the blood-contacting surface.

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3. The hollow fiber membrane of claim 1 or 2, wherein the

content of the hydrophilic polymer in the polysulfone type hollow fiber membrane is 20 to 40 mass % at the uppermost layer of the surface of the membrane on the blood-contacting side, 5 to 20 mass % at the proximate layer thereof, and 25 to 50 mass % at the uppermost layer of the other surface of the membrane, i.e., the reverse side of the surface on the blood-contacting side.

4. The hollow fiber membrane of any of claims 1 to 3, comprising 99 to 80 mass % of the polysulfone type resin and 1 to 20 mass % of the hydrophilic polymer as the main components.

5. The hollow fiber membrane of any of claims 1 to 4, wherein the hydrophilic polymer is polyvinyl pyrrolidone.

6. The hollow fiber membrane of any of claims 1 to 5, wherein the amount of the hydrophilic polymer eluted from the hollow fiber membrane is 10 ppm or less.

7. The hollow fiber membrane of any of claims 1 to 6, wherein the rate of pore area of the outer surface of the hollow fiber membrane is 8% to less than 25%.

8. The hollow fiber membrane of any of claims 1 to 7, wherein the hydrophilic polymer is crosslinked so as to be insoluble in water.

9. The hollow fiber membrane of any of claims 1 to 8, for use in a blood purifier.